

What is claimed is:

1. A disk cartridge in which a discoid recording medium is rotatably contained in a housing and which is inserted into a slot formed in a disk drive to be placed in the disk drive,

5 wherein the housing includes an opening for a read/write head of the disk drive to access a surface of the recording medium, a rotary shutter for opening/closing the opening, and shutter locking means for locking the rotary shutter at a closed position,

10 the rotary shutter is constituted so that a lock on the rotary shutter is released by lock releasing means and shutter opening means provided in the disk drive when inserting the disk cartridge into the disk drive, and the rotary shutter is rotated to an open position, and

15 the rotary shutter is constituted to be led to the closed position when ejecting the disk cartridge from the disk drive by the force of ejection.

2. The disk cartridge according to claim 1,
wherein the shutter locking means comprises:

20 a shutter locking member having a convex engaging portion which can engage with a concave engaging portion formed on a periphery of the rotary shutter, and rotatably provided between a shutter locking position where the convex engaging portion engages with the concave engaging portion and a lock releasing
25 position where the convex engaging portion is escaped from the concave engaging portion in the housing; and

a spring member which urges the shutter locking member toward the shutter locking position.

3. The disk cartridge according to claim 2,

wherein the lock releasing means provided in the disk drive is constituted of a lock releasing member which engages with the shutter locking member when inserting the disk cartridge into the disk drive and rotates the shutter locking member from the shutter locking position to the lock releasing position by resisting urging force of the spring member.

10 4. The disk cartridge according to claim 3,

wherein an arcuate groove which is concentric with the rotary shutter is formed in the housing of the disk cartridge, and a shutter knob which protrudes from the arcuate groove and can move along the arcuate groove is attached to the rotary shutter, and

the shutter opening means provided in the disk drive is constituted of an engaging wall which engages with the shutter knob of the rotary shutter released by the lock releasing means when inserting the disk cartridge into the disk drive and rotates the rotary shutter to the open position.

5. A disk drive including a slot to which a disk cartridge in which a discoid recording medium is rotatably contained in a housing is inserted, a driving mechanism which rotates the recording medium to be driven, and a read/write head which accesses a surface of the rotating recording medium to record/reproduce information,

wherein the housing of the disk cartridge is provided with an opening for the read/write head to access the surface of the recording medium, a rotary shutter for opening/closing the opening, and shutter locking means for locking the rotary shutter at a closed position,

the disk drive further includes lock releasing means for releasing a lock on the rotary shutter by the shutter locking means when inserting the disk cartridge into the disk drive, and shutter opening means for rotating the rotary shutter to an open position, and

the disk drive still further includes shutter closing means for leading the rotary shutter to the closed position by engaging with the rotary shutter when ejecting the disk cartridge from the disk drive.

6. The disk drive according to claim 5, wherein the shutter closing means is constituted of an elastic member.

7. The disk drive according to claim 5, wherein the shutter locking means provided in the disk cartridge comprises:

a shutter locking member having a convex engaging portion which can engage with a concave engaging portion formed on a periphery of the rotary shutter, and rotatably provided between a shutter locking position where the convex engaging portion engages with the concave engaging portion and a lock releasing position where the convex engaging portion is escaped from the

concave engaging portion in the housing; and

a spring member which urges the shutter locking member toward the shutter locking position.

8. The disk drive according to claim 7,

5 wherein the lock releasing means is constituted of a lock releasing member which engages with the shutter locking member when inserting the disk cartridge into the disk drive and rotates the shutter locking member from the shutter locking position to the lock releasing position while resisting urging
10 force of the spring member.

9. The disk drive according to claim 8,

wherein an arcuate groove which is concentric with the rotary shutter is formed in the housing of the disk cartridge, and a shutter knob which protrudes from the arcuate groove and
15 can move along the arcuate groove is attached to the rotary shutter, and

the shutter opening means is constituted of an engaging wall which engages with the shutter knob of the rotary shutter released by the lock releasing means when inserting the disk
20 cartridge into the disk drive and rotates the rotary shutter to the open position.

10. The disk drive according to claim 9,

wherein the shutter closing means is constituted of an elastic member which is engaged with the shutter knob and bent
25 by the shutter knob to allow the shutter knob to pass through when inserting the disk cartridge into the disk drive, engaged

with the shutter knob to lead the rotary shutter to a closed position to be locked by the shutter locking member when ejecting the disk cartridge from the disk drive, and bent by the shutter knob to allow the shutter knob to pass through.

5 11. The disk drive according to claim 10,

 wherein the elastic member is extended in a direction which is orthogonal to an insertion direction of the disk cartridge into the disk drive, constituted of a flat spring which forms a reverse V-shape at a cross section vertical to
10 a direction which the elastic member extends, and bent so as to open the V shape by engaging with the shutter knob to allow the shutter knob to pass through.

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